What is claimed is:

1. An electrostatic-capacity-type acceleration sensor comprising:

a plurality of capacitance detectors including plural pairs of moving electrodes and fixed electrodes which are arranged to face with each other so that facing areas therebetween are respectively varied in response to an input acceleration,

wherein the plurality of capacitance detectors are constituted in such a way that the facing area formed between one pair of the moving electrode and the fixed electrode differs from the facing area formed between other pair of the moving electrode and the fixed electrode, so that an acceleration signal is produced in response to capacitance variation caused by the pairs of the moving electrodes and the fixed electrodes.

2. An electrostatic-capacity-type acceleration sensor according to claim 1, wherein a plurality of the moving electrodes are integrally formed together with respect to the plurality of capacitance detectors.

3. An electrostatic-capacity-type acceleration sensor according to claim 1 or 2, wherein a relatively small input acceleration is detected based on the acceleration signal produced by one capacitance detector in which the facing area between the moving electrode and the fixed electrode is relatively small, while a relatively large input acceleration is detected based on the acceleration signal produced by other capacitance detector in which the facing area between the moving electrode and the fixed electrode is relatively large.

4. An electrostatic-capacity-type acceleration sensor according to claim 1, wherein each of the capacitance detectors comprises first and second moving electrodes, and first and second fixed electrodes, which are respectively arranged to face with each other with first and second facing areas therebetween in such a way that

the first facing area formed between the first moving electrode and the first fixed electrode decreases while the second facing area formed between the second moving electrode and the second fixed electrode increases in response to the input acceleration, whereby the capacitance detector produces the acceleration signal in response to a ratio or a difference between a first capacitance occurring between the first moving electrode and the first fixed electrode and a second capacitance occurring between the second moving electrode and the second fixed electrode.

5. An electrostatic-capacity-type acceleration sensor according to claim 4, wherein the first and second moving electrodes are integrally formed together with respect to the plurality of capacitance detectors.

6. An electrostatic-capacity-type acceleration sensor according to claim 4 or 5, wherein a relatively small input acceleration is detected based on the acceleration signal produced by one capacitance detector in which the facing area between the moving electrode and the fixed electrode is relatively small, while a relatively large input acceleration is detected based on the acceleration signal produced by other capacitance detector in which the facing area between the moving electrode and the fixed electrode is relatively large.

7. An acceleration measuring device comprising:

an electrostatic-capacity-type acceleration sensor including a first capacitance detector having plural pairs of moving electrodes and fixed electrodes, which are arranged to face each other on a substrate surface such that facing areas therebetween are varied in response to an input acceleration, and a second capacitance detector having plural pairs of moving electrodes and fixed electrodes, which are arranged to face each other on the substrate surface such that facing areas therebetween are varied in response to the input acceleration and are set to be larger

than the facing areas between the moving electrodes and the fixed electrodes of the first capacitance detector when the input acceleration is zero;

a first detection circuit for producing a first acceleration signal in response to capacitance variation occurring between the moving electrodes and the fixed electrodes of the first capacitance detector;

a second detection circuit for producing a second acceleration signal in response to capacitance variation occurring between the moving electrodes and the fixed electrodes of the second capacitance detector; and

a selector for selectively outputting the first acceleration signal as long as the first acceleration signal does not exceed a threshold level determined in advance and for selectively outputting the second acceleration signal when the first acceleration signal exceeds the threshold level.

8. An acceleration measuring device according to claim 7, wherein a relatively small input acceleration is detected based on the first acceleration signal produced by the first capacitance detector, while a relatively large input acceleration is detected based on the second acceleration signal produced by the second capacitance detector.

9. An acceleration measuring device according to claim 7, wherein each of the first and second capacitance detectors comprises first and second moving electrodes, and first and second fixed electrodes, which are respectively arranged to face each other with first and second facing areas therebetween in such a way that the first facing area formed between the first moving electrode and the first fixed electrode decreases while the second facing area formed between the second moving electrode and the second fixed electrode increases in response to the input acceleration, whereby each of the capacitance detectors produces an acceleration signal in response to a ratio

or a difference between a first capacitance occurring between the first moving electrode and the first fixed electrode and a second capacitance occurring between the second moving electrode and the second fixed electrode.

10. An acceleration measuring device according to claim 7, wherein the threshold level is determined in advance to exclude a sharp varying region of a capacitance varying characteristic established with respect to variations of the input acceleration, thus avoiding occurrence of error detection due to noise.